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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/455,823	12/06/1999	KENNETH A. FREELING	Freeling-P1-99	5609

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EXAMINER	
CHEUNG, MARY DA ZHI WANG	
ART UNIT	**PAPER NUMBER**
3621	

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/455,823	FREELING ET AL.	
	Examiner	Art Unit	
	Mary Cheung	3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *See Continuation Sheet* is/are rejected.

7)☒ Claim(s) *4, 9-11, 16-19, 21, 26, 24/4, 24/9-11, 24/16-19, 24/21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims rejected are 1-3, 5-8, 12-15, 20, 22-23, 27-31, 24/1-3, 24/5-8, 24/12-15, 24/20, 24/22-23, 25/1-3, 25/5-8, 25/12-15, 25/20, 25/22-23.

DETAILED ACTION

Status of the Claims

1. This action is in response to the RCE filed on April 19, 2004. Claims 1-31 are pending. Claims 28-31 have been amended.

Claim Objections

2. Claim 30 is objected to because of the following informalities: claim 30 should be depend on any of claims 1 and 29, not claims 1, 29 and 30. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 27 is rejected under 35 U.S.C. 102(e) as being anticipated by Challener et al., U. S. Patent Number 6,081,793.

As to claim 27, Challener teaches a method for high reliability communication of demographic data from encrypted identifies, the method including (abstract and Figs. 1A, 2A and 7):

(i.) certifying, by computer, a plurality of respective registration by substeps including (Figs. 1A-1C):

receiving a plurality of respective participant registration applications including respective participant identification data and participant demographic data (column 7 lines 38-60 and Figs. 1A, 7);

for any respective one of said applications accepted for authorization, issuing respective registration data, including encrypted participant identification data and encrypted participant demographic data (column 7 line 52 – column 8 line 9 and Fig. 7; *specifically, the "encrypted participant identification data" corresponds to the encrypted ballot ID as taught by Challener*); and

(ii.) using, by computer, said registration data in substeps of (Figs. 1A, 7):

respectively receiving said registration data and query-responsive digital signal (column 7 lines 52 – column 8 lines 9 and Figs. 1A, 7); and

associating, by computer, said encrypted participant identification data respectively with said registration data and said query-responsive digital signals in producing an accumulation such that it is not possible to directly associate said participant identification with either said registration data or said query-responsive digital signals is taught by Challener as the participant identification data and registration data have to be encrypted (column 7 line 38-column 8 line 18 and Fig. 7).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-3, 5-8, 12-15, 20, 22-23, 24/1-3, 24/5-8, 24/12-15, 24/20, 24/22-23 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Challener et al., U. S. Patent Number 6,081,793 in view of McClure et al., U. S. Patent Number 6,250,548, and in further view of Herz et al., U. S. Patent 6,088,722.

As to claim 1, Challener teaches a computer-aided method for conducting a poll with high reliability to produce a demographic profile corresponding to an

accumulation of response data from encrypted identities, the method including (abstract and Figs. 1A, 2A and 7):

for each one of a plurality of local computers, carrying out registration substeps of (Figs. 1A-1C):

(i.) receiving an application for participant registration, the application including participant identification data and participant demographic data (column 7 lines 38-60 and Fig. 7);

(ii.) if said application is accepted, then issuing respective registration data, including encrypted participant identification data (column 8 lines 1-9 and Fig. 7; *specifically, the "encrypted participant identification data" corresponds to the encrypted ballot ID as taught by Challener*);

thereafter, for a portion of the local computers, carrying out polling substeps of (Figs. 1A-1C):

(iii.) receiving digital signals over the Internet including the encrypted participant identification data and poll response data for a first question in a poll (column 8 lines 10-20 and Fig. 7; specifically, this limitation is taught by Challener as the journal server receives the encrypted ballot ID and the completed ballot in a cryptolope through internet);

associating the encrypted participant identification data, the response data, and the demographic data, respectively, to produce a result corresponding to an accumulation of the response data from encrypted identities (column 8 lines 19-52 and Fig 7).

Challener further teaches responsive to said receiving of said encrypted participant identification data, preventing tampering and repudiation in response to the first question (Figs. 7-8). Challener does not specifically teach responsive to said receiving of said encrypted participant identification data, preventing more than one respective response to the first question. McClure teaches a voter is able to cast one and only one ballot (column 36 lines 66-67). It would have been obvious to one of ordinary skill in the art at the time the invention was to allow the voting system of Challener to include the feature of only allowing voter to case only one vote because it would prevent voting violation.

Challener modified by McClure does not specifically teach the produced result corresponding to an accumulation of the response data is a demographic profile. However, Herz teaches producing a demographic profile corresponding to an accumulation of response data (abstract and column 4 lines 50-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the produced result in the teaching of Challener modified by McClure to be a demographic profile corresponding to an accumulation of response data better analyzing the poll result.

As to claim 2, the method of Challener modified by McClure does not specifically teach devoid of the participant identification data. It would have been obvious to one of ordinary skill in the art to include the feature of devoid of the participant identification data because the next voter or other people who review the voting screen would not know whom said participant voted for, and it would protect voting privacy for said participant.

As to claim 3, Challener teaches generating a printed report including data generated from the accumulation of the response data and from the participant demographic data (column 3 lines 55-59 and Figs. 1A, 1C, 7-8).

As to claim 5, generating a report including data generated from the group consisting of the accumulation of response data from the first question, an accumulation of response data for a second question, and the demographic data is taught by Challener as generating the election results from the valid ballots (Fig. 1A; *specifically, "an accumulation of response data for a second question" corresponds to a vote response received from a voter other the voter submitted the response for the first question*).

As to claim 6, Challener teaches the step of off line generating certificates of authorization as a portion of said registration data (Fig. 6; specifically, the "certificate of authorization" corresponds to the paper ballot in Challener's teaching).

As to claim 7, Challener teaches said certificates include a periodic time limit requiring updating said demographic data (column 4 line 59 – column 5 line 5).

As to claim 8, said demographic data cannot be modified under participant control is taught by Challener as updating said demographic data by the network distribution system user (column 4 line 59 – column 5 line 5).

As to claim 12, Challener teaches the demographic data includes voter's name, address, voter registration number, social security number, driver's license number, or any other identifying data (column 7 lines 54-57). Challener does not

explicitly teach said demographic data including a data set of at least three members from the group consisting of residence, age, gender, party, income, and race. It would have been obvious to one of ordinary skill in the art to allow "any other identifying data" in Challener's teaching to include residence, age, gender, party, income, and race for better verifying and categorizing voters.

As to claim 13, Challener teaches the demographic data includes voter's name, address, voter registration number, social security number, driver's license number, or any other identification data, and said members are verified in determining if said application is accepted (column 7 lines 54-57). Challener does not explicitly teach said demographic data including a data set of at least two members of the group consisting of residence, age, gender, party, income, and race, and said member verified at least one source from the group consisting of a charge card, a debit card, a bank card, and a drivers license. It would have been obvious to one of ordinary skill in the art to allow "any other identifying data" in Challener's teaching to include residence, age, gender, party, income, and race, and further allowing said member verified at least one source from the group consisting of a charge card, a debit card, a bank card, and a drivers license for better verifying and categorizing voters.

As to claim 14, Challener teaches using public keys for securing the voting process (column 3 lines 44-50). Challener further teaches implementing digital signature for further securing the voting process (column 6 lines 51-54). Challener does not explicitly teach the encrypted participant identification data is made verifiable by using a public key cryptographically-based digital signature. It

would have been obvious to one of ordinary skill in the art to allow the encrypted participant identification data in Challener's teaching to be verifiable by using a public key cryptographically-based digital signature for better securing the voting process.

As to claim 15, Challener teaches generating a private key and a public key pair, and associating the public key with the demographic data and generating a respective participant client-side certificate (Figs. 2A, 7; *specifically, the "client-side certificate" corresponds to the ballot in Challener' teaching*).

As to claim 20, Challener teaches providing equivalent computer systems for carrying out the step of receiving the digital signals over the Internet, said equivalent computer systems communicating to form the accumulation of response data (Figs. 1A, 1C).

As to claim 22, Challener teaches cryptographic operations including encrypting data for securing the voting process (column 3 line 66 – column 4 line 15). Challener does not specifically teach encrypting a database formed by carrying out said step of associating. It would have been obvious to one of ordinary skill in the art to allow the cryptographic operations in Challener's teaching to including encrypting a database formed by carrying out said step of associating for better securing the voting process.

As to claim 23, the step of forming a data structure mapping a database formed by carrying out said step of associating, said data structure mapping the database to be consistently form a pattern of data types is taught by Challener as

the received data is stored in its correspondence location (column 4 line 59 – column 5 line 35).

As to claims 24/1, 24/2, 24/3, 24/5, 24/6, 24/7, 24/8, 24/12, 24/13, 24/14, 24/15, 24/20, 24/22 and 24/23, Challener teaches the step of issuing respective registration data, including encrypted participant identification data, including issuing a schema including said participant demographic data (Figs. 2A, 7).

Claims 28-29 are rejected for the similar reason as claim 1. In addition, Claims 28-29 includes extra features: a certifying authority digital electrical computer apparatus, and a back office and research computer system. In Challener, the authentication server (Fig. 1A) corresponds to the certifying authority digital electrical computer apparatus as claimed. The teaching of Challenger modified by McClure does not teach a back office and reach computer system programmed to control carrying out polling substeps. However, Herz teaches a back office and research computer system programmed for polling analysis process (abstract and column 4 lines 50-65).). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the teaching of Challener modified by McClure to include be a back office and reach computer system programmed to control carrying out polling process for better analyzing the poll result.

As to claim 30, Challener teaches issuing respective registration data as an electronic message (Figs. 1A, 2A, 7). Challener does not specifically state said registration data stored in a browser. However, McClure teaches storing the registration data as an electronic message in a browser (column 36 lines 23-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the registration data of Challener to be stored in a browser so that the voter with a proper access code would be able easily to access his or her registration information.

As to claim 31, Challener teaches issuing respective registration data into memory of a smart card (Fig. 2A).

8. Claims 25/1-3, 25/5-8, 25/12-15, 25/20 and 25/22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Challener et al., U. S. Patent Number 6,081,793 in views of McClure et al., U. S. Patent Number 6,250,548 and Herz et al., U. S. Patent 6,088,722, in further view of Blair et al., U. S. Patent 5,671,386.

As to claims 25/1-3, 25/5-8, 25/12-15, 25/20 and 25/22-23, Challener modified by McClure and Herz teaches conducting a poll as discussed above. Challener modified by McClure and Herz does not specifically teach providing duplicative electronic pathways for carrying out the step of receiving digital signals over the Internet. However, Blair teaches using duplicative electronic pathways for transmitting signals (column 9 lines 6-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the teaching of Challener modified by McClure and Herz to use duplicative electronic pathways to transmit digital signal over the Internet for efficiently transmitting the polling information over the Internet.

Allowable Subject Matter

9. Claims 4, 9-11, 16-19, 21, 26, and 24/4, 24/9, 24/10, 24/11, 24/16, 24/17, 24/18, 24/19, 24/21, 25/4, 25/9, 25/10, 25-11, 25/16, 25/17, 25/18, 25/19, 25/21,

are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments presented in the appeal brief filed on December 22, 2003 have been fully considered but they are not persuasive.

Applicant argues that Challener teaches decrypting the participant identification data rather than associating the encrypted participant identification data as claimed. Examiner has revised the interpretation the participant identification data as shown in the current office action to better match the claimed limitation with Challener' teaching.

In response to applicant's argument that Challener modified by McClure fails to teach preventing more than one respective response to the first question, examiner respectfully disagrees because McClure's teaching of allowing a voter is able to cast one and only one ballot would correspond to the matter of preventing more than one respective response to the first question. The purpose of allowing cast only one ballot is to prevent more than one vote to be counted for the ballot.

In response to applicant's argument for claim 2 that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the

claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant argues that Challener does not teach it is not possible to directly associate the participant identification data with the registration data, Examiner respectfully disagrees because to associate the participant identification data with the registration data, encryption process is performed first. Thus, the associating step is not a direct process.

In response to applicant's all other arguments, the examiner has either maintained the original rejections because it is believed that the cited prior art teach the claimed limitations, or the examiner has revised the rejections or the citations for better matching the claimed limitations.

Conclusion

11. Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Cheung whose telephone number is (703)-305-0084. The examiner can normally be reached on Monday – Thursday from 8:00 AM to 5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell, can be reached on (703) 305-9768.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

The fax phone number for the organization where this application or proceedings is assigned are as follows:

(703) 872-9306 (Official Communications; including After Final Communications labeled "BOX AF")

(703) 746-5619 (Draft Communications)

Hand delivered responses should be brought to Crystal Plaza Two, Room 1B03.

Mary Cheung
Patent Examiner
Art Unit 3621
July 26, 2004